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REMARKS

Applicant has carefully considered the matters raised by the Examiner in the outstanding Office Action but remains of the position that patentable subject matter is present. Applicant respectfully requests reconsideration of the Examiner's position based on the Declaration of Mr. Kawabe, the amendments to the specification and the following remarks.

The present invention includes an extrusion coating method capable of coating a thin layer of a high viscosity coating composition at a uniform thickness and high speed. In one of the novel aspects of the invention, the viscosity of the adjacent layer solution is at least 2.5 times the viscosity of the lowermost layer solution. Furthermore, the viscosity of the adjacent layer solution is not less than 10 mPa·s.

In order to emphasize this aspect of the present Invention, Claim 1 has been amended herein to add the limitation that the viscosity of the adjacent layer is not less than 10 mPa.s (0.01 Pa.s). Support for this amendment can be found on page 9, line 9 as well as in Claim 6 as

filed. Since the limitation of Claim 6 has been added to Claim 1, Claim 6 has been cancelled herein. Also, because Claim 7 had been dependent upon Claim 6, Claim 7 has been amended herein to be dependent upon Claim 1.

Claims 1-7 had been rejected as being unpatentable over Saito. Saito teaches an extrusion coating method where the viscosity of the adjacent layer solution is between 1 and 2 times the viscosity of the lowermost layer solution (Table 2 and Table 3). The Examiner had stated that it would be obvious to optimize the lower limit of the viscosity of the lowermost layer solution based on the teachings of Saito in order to arrive at the present invention.

Applicant submits that it would not be obvious to adjust the viscosity of both the lowermost layer solution and the adjacent layer solution to arrive at a ratio of 2.5 or greater because (1) Saito teachings nothing about adjusting the viscosity of the two solutions to arrive at <u>any</u> ratio; (2) Saito does not teach, inherently or otherwise, a ratio of 2.5 or greater for the two solutions; (3) Saito does not teach that the viscosity of the adjacent layer solution is not less than 10 mPa.s and (4) based on

the data contained in the Declaration, the ratio of 2.5 is superior to the ratio of 2.0, evidencing the criticality of the ratio.

The Examiner's position is that Saito teaches one of skill in the art to adjust the viscosity to arrive at the ratio of 2.5 and above because some of the numbers in Table 2 of Saito lean in that direction. Respectfully, this is pure hindsight.

It is hindsight because nowhere in Saito does he mention, teach or suggest that the "ratio" of the viscosity of the lowermost layer solution and the adjacent layer solution is a critical limitation. Only Applicant teaches that the ratio is critical and only Applicant teaches that the ratio is 2.5 or above.

The difference between 2.0 and 2.5 is a difference with distinction. The ratio of 2.5 is not merely a random number, arbitrarily selected. Applicant has discovered that a thin layer can be uniformly coated when the viscosity of the adjacent layer is at least 2.5 times the viscosity of the lowermost layer. Applicant has provided

test data in Declaration form to demonstrate the criticality of this viscosity ratio.

Table 12 of the Declaration demonstrates that the Samples with a viscosity ratio of 2.5 have a consistently thin adjacent layer thickness even though the viscosity of the adjacent layer solution increases. For example, the coating thickness of the adjacent layer of Samples 11-1, 11-3, 11-5 and 11-7 remains substantially uniform (30, 22, 20 and 20 μm, respectively) as the viscosity of the adjacent layer solution increases. In contrast, the Samples with a viscosity ratio of 2.0 have an increasing adjacent layer coating thickness as the viscosity of the adjacent layer solution increases. For example, the coating thickness of the adjacent layer of Samples 11-2, 11-4, 11-6 and 11-8 consistently increases (from 30 to 75 μm), as the viscosity of the adjacent layer solution increases. Thus, having a viscosity ratio of 2.5 versus 2.0 is a meaningful limitation and not some arbitrary number chosen at random.

It can also be seen from Table 12 that the effects of the viscosity ratio of the invention are further enhanced when the viscosity of the adjacent layer solution is not less than 10 mPa·s as recited in claim 1. For example, the

lower limit coating thickness of the adjacent layer of Samples 11-1, 11-3, 11-5 and 11-7 (having an adjacent layer viscosity of not less than 10 mPa·s) is approximately 30-60% thinner than the lower limit coating thickness of Samples 11-2, 11-4, 11-6 and 11-8. Additionally, Tables 2 and 3 of Saito teach that the viscosity of the adjacent layer solution is from 6 to 12 mPa·s, which falls both above and below the adjacent layer viscosity limitation of claim 1. Thus, Saito does not teach or direct one of skill in the art the enhanced effects of the invention that are realized when the viscosity of the adjacent layer solution is not less than 10 mPa·s.

Table 12 of the Declaration therefore demonstrates that uniform coating can be achieved when the ratio of claim 1 is satisfied. Saito does not teach either that the viscosity ratio is important or the criticality of the viscosity ratio shown in the Declaration. Furthermore, Saito does not teach that the lower limit of the coating thickness of the adjacent layer can be held uniform by satisfying the ratio of claim 1. Finally, Saito does not teach the enhanced effects when the viscosity of the adjacent layer solution is not less than 10 mPa·s because he teaches 6 mPa.s is acceptable. Applicant therefore

submits that the present invention is patentable over the teachings of Saito.

Applicant has noticed a typographical error that had been made to the specification during the previous response. Applicant has deleted this language herein.

In view of the foregoing and the enclosed, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate requests are hereby made and authorization is given to debit Account # 02-2275.

Respectfully submitted,

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Encl: Executed Declaration of Mr. Shigetoshi KAWABE
Return receipt postcard

Our ref: KON-1671 Client's refs: CDR-11858U
P-4760-001-0000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of: S. KAWABE :

Group : 1732

Serial No. : 09/933,250 :

Examiner: M. Eashoo

Filed : August 20, 2001 :

For : AN EXTRUSION COATING METHOD :

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DECLARATION

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

S i r:

I, Shigetoshi Kawabe, hereby declare and say as follows:

1. I am the sole inventor of this Application.

2. I received a Bachelors degree in Engineering from Yokohama National University in 1986.

3. Since 1986, I have been employed by Konica Corporation, the Assignee of this Application. During my employment at Konica, I have engaged in research and development in the field of photographic materials.

4. I am aware that the Examiner has rejected this Application based on US Patent No. 5,670,214 to Saito. Tests have been performed and are reported herein in order to demonstrate the criticality of the viscosity ratio of the present invention. These tests were performed either by myself or under my direct supervision and control.

5. Eight web-shaped substrates were prepared and coated in accordance with Example 1 of the Application. The viscosity of the lowermost layer solution (a) reported in mPa.s and the viscosity of the adjacent layer solution (b) reported in mPa.s were varied to form Samples 11-1 through 11-8 as shown in Table 12. The ratio of the viscosity of the adjacent layer solution to the viscosity of the lowermost layer solution

(b/a) of Samples 11-1, 11-3, 11-5 and 11-7 was 2.5. The ratio of the viscosity of the adjacent layer solution to the viscosity of the lowermost layer solution (b/a) of Samples 11-2, 11-4, 11-6 and 11-8 was 2.0.

6. Samples 11-1 through 11-8 were evaluated for the lower limit coating thickness of the adjacent layer in accordance with Example 1 of the Application. The lower limit coating thickness of the adjacent layer is defined on page 36 of the Application. The results of these evaluations are illustrated in Table 12.

Table 12

Sample No.	a	b	b/a	Lower Limit Coating Thickness of Adjacent Layer in μm	Remarks
11-1	200	500	2.5	30	Present Invention
11-2	250	500	2.0	75	Comparative
11-3	100	250	2.5	22	Present Invention
11-4	125	250	2.0	58	Comparative
11-5	40	100	2.5	20	Present Invention
11-6	50	100	2.0	50	Comparative
11-7	32	80	2.5	20	Present Invention
11-8	40	80	2.0	30	Comparative

7. Table 12 demonstrates that the lower limit coating thickness of the adjacent layer of Samples 11-1, 11-3, 11-5 and 11-7 remained substantially uniform as the viscosity of the adjacent layer solution increased. In contrast, the lower limit coating thickness of the adjacent layer of Samples 11-2, 11-4, 11-6 and 11-8 increased dramatically as the viscosity of the adjacent layer solution increased.

8. Table 12 also demonstrates approximately a 30-60% decrease in the lower limit coating thickness of the adjacent layer at a b/a ratio of 2.5 compared to the lower limit coating thickness of the adjacent layer at a b/a ratio of 2.0 when the viscosity of the adjacent layer solution is not less than 10 mPa·s.

9. Table 12 therefore demonstrates the criticality of the viscosity ratio of the present invention at a b/a ratio of 2.5, as well as the enhanced effects of the invention when the viscosity of the adjacent layer solution is not less than 10 mPa·s. I am of the opinion that the results

illustrated in Table 12 are both surprising and unexpected based on the teachings of Saito.

It is declared by undersigned that all statements made herein of undersigned's own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment, or both, under section 18 U.S. Code 1001, and that such willful false statements may jeopardize the validity of this Application or any patent issuing thereon.

Shigetoshi Kawabe.

Shigetoshi Kawabe

Dated: This 23rd day of April , 2004.